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ABSTRACT

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A label switching routing protocol for establishing a datapath as a sequence of locally unique labels in an optical communications network, is provided. A wavelength on an optical cross-connect is considered as a label, or one portion of a label. Timeslots may be assigned to designated wavelengths so as to form the second portion of a composite label. An optical/time cross-connect (OTXC) capable of wavelength conversion from an input to an output interface creates the datapath based on wavelength to wavelength substitution, under the control of a multi-protocol label switching (MPLS) protocol.